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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,810	12/13/2003	Alan D. Eastman	07575.006	2782
26582	7590	07/26/2005	EXAMINER	
HOLLAND & HART, LLP 555 17TH STREET, SUITE 3200 DENVER, CO 80201			TOOMER, CEPHIA D	
			ART UNIT	PAPER NUMBER
			1714	
DATE MAILED: 07/26/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/734,810

Applicant(s)

EASTMAN ET AL.

Examiner

Cephia D. Toomer

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23,26,27,30,33-40,43-46 and 75 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23,26,27,30,33-40,43-46 and 75 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This Office action is in response to the amendment filed May 9, 2005 in which claims 1-22, 24-25, 28-29, 31-32, 41-42, 47-74 and 76 were canceled and claims 23, 26, 27, 30, 33-36, 44 and 75 were amended.

The rejection of the claims under 35 USC 102(b) is withdrawn in view of the amendment to the claims. The rejection of the claims under 35 USC 103(a) over those claims that were previously rejected is maintained and for those claims that were not rejected in the previous office action a new rejection follows below.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 35 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim is rejected because glycerol does not satisfy the formula ROH.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 23, 26, 30, 33-40, 43-46 and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over CA 2,342,824.

CA teaches a liquid fuel composition comprising 10-50 vol. % of at least two kinds of C₂-C₁₁ alcohols, 40-60 vol. % of at least one kind of saturated or unsaturated hydrocarbons (naphtha) and 10-30 vol. % of at least one kind of ethers having two chain hydrocarbon groups whose number of carbon atoms is 6 or less (see abstract; page 3, first paragraph, last paragraph and page 4, last paragraph). The ethers include methyl tertiary butyl ether (MTBE), tertiary amyl methyl ether (TAME) and dibutyl ether (see page 4, fourth paragraph). CA teaches that conventional additives may be included in the fuel composition (see page 10, lines 4-9). CA teaches the limitations of the claims other than the differences that are discussed below.

In the first aspect, CA differs from the claims in that it does not specifically teach a mixture of ethanol and isobutanol or isopropanol (claims 23, 26, 30, 37 and 46). However, it would have been obvious to one of ordinary skill in the art to have combined these alcohols because CA specifically teaches that at least two alcohols having 2-11 carbons may be combined to form the alcoholic component of the fuel composition.

In the second aspect, CA differs from the claims in that it does not specifically teach the claimed additives (claim 44). However, it would have been obvious to one of ordinary skill in the art to have included the claimed additives because CA teaches that conventional additives may be included in the fuel composition.

In the third aspect, CA differs from the claims in that it does not specifically teach the proportions of 9.7% and 8.9% of MTBE (claims 23, 26 and 30). However, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. v. Banner*, 227 USPQ 773 (Fed. Cir. 1985).

In the fourth aspect, CA differs from the claims in that it does not specifically teach the range of 60-65 wt. % alcohol (claim 33 and its dependents and 75). However, CA does teach that the composition may contain 50% of the alcohol and a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. v. Banner*, 227 USPQ 773 (Fed. Cir. 1985).

In the fifth aspect, CA differs from the claims in that it does not specifically teach the Reid Vapor Pressure (RVP) of claim 43. However, it would have been obvious to one of ordinary skill in the art to have prepared a fuel composition possessing the claimed RVP because reformulated gasoline fuels that are formulated for internal combustion engines have a vapor pressure ranging from 8 to 15 psi, as disclosed as general knowledge in Applicant's specification (see page 2 paragraph 6).

5. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over CA 2,342,824 as applied to claims above, and further in view of Gonzalez (US 5,316,558).

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CA has been discussed above. CA fails to teach that the ether of its invention may be ethyl-t-butyl ether (ETBE). However, Gonzalez teaches the MTBE, TAME, both taught by CA, are art recognized equivalents to ETBE. See col. 5, lines 11-15.

It would have been obvious to one of ordinary skill in the art to have substituted ETBE for MTBE because they are recognized as gasoline octane supporters.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 33-36, 38, 39, 40, 43, 44 and 75 are rejected under 35 U.S.C. 102(e) as being anticipated by Binions 20040107634.

Binions teaches a fuel composition comprising 10-80 vol. % of a first component comprising at least two aliphatic organic non-hydrocarbons; 20-65 vol.% of a second component comprising at least one hydrocarbon as the second component; 1-35 vol% of a third component which comprises an oxygenate (see abstract). The first component may be a mixture of alcohols such as ethanol, propanol, butanol, etc (see Examples 1-10). The second component may be derived from any petroleum source such as light naphthas (see paragraph 0021). The third component may be methyl-t-

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butyl ether or ethyl-t-butyl ether (see paragraph 0027). The fuel composition may contain conventional additives such as stabilizers and antioxidant (see paragraph 0033). The RVP of the naphtha is from 5-13 psi (Table and paragraph 0023).

Accordingly, Binions teaching all the limitations of the claims anticipates the claims.

Claim Rejections - 35 USC § 103

8. Claims 23, 26, 27, 30, 37, 45 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Binions 20040107634.

Binions has been discussed above. Binions teaches the limitations of the claims other than the differences that are discussed below.

Binions differs from the claims in that he does not specifically teach a mixture of ethanol and isobutanol. However, it would have been obvious to one of ordinary skill in the art to prepare a fuel comprising the mixture given that Binions exemplifies alcohol mixtures as the first component. With respect to the proportions of these alcohols, it would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the proportions through routine experimentation for best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA


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1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cephia D. Toomer whose telephone number is 571-272-1126. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Cephia D. Toomer
Primary Examiner
Art Unit 1714

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